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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/586,292	07/13/2006	Tiam Fatt Tey	PA040005	3077
7590		06/23/2009		
Joseph J Laks Patent Operations P O Box 5312 Princeton, NJ 08543-5312				
EXAMINER				
TRAN, PABLO N				
ART UNIT		PAPER NUMBER		
2618				
MAIL DATE		DELIVERY MODE		
06/23/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/586,292

**Applicant(s)**

TEY ET AL

**Examiner**

Pablo N. Tran

**Art Unit**

2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 June 2009.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.  
4a) Of the above claim(s) 1-7 and 9 is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 8 and 10-13 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date \_\_\_\_\_  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_  
5) ☐ Notice of Informal Patent Application  
6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 8 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ammar et al. (hereinafter "Ammar", US Pat. No. 20050124307) and in view of Fujishima et al. (hereinafter, Fujishima", JP09097993A).

As per claim 8, Ammar disclosed a RF unit comprising a tuner (see Fig. 3/no. 114b), a demodulator (see Fig. 3/no. 172) and a mixer (see Fig. 3/no. 122, 154), wherein the tuner or the tuner and the mixer are arranged on a first substrate (see Fig. 1/no. 102) and the mixer and the demodulator or the demodulator are arranged on a second substrate (see Fig. 3/no. 106), wherein the RF unit further comprises a housing having a single frame (see Fig. 3/no. 100) at least partly accommodating the first and/or second substrates.

Ammar does not explicitly suggest such arrangement of the substrates as claimed. However, Fujishima teaches such arrangement of the substrates in parallel on respective different levels (fig. 1-fig. 8). Therefore, it would have been obvious to one of

ordinary skill in the art for Ammar to utilize such substrates arrangement, as taught by Fujishima, in order to reduce the RF unit size.

The modified RF apparatus of Ammar and Fujishima further disclosed means are provided to maintain a predetermined distance between the first and the second substrate, wherein connectors are provided for electrically connecting the first and the second substrates, wherein at least one of the connectors has one or more contacts extending through the first and the second substrate, said contacts being adapted for mounting and connecting the RF unit to a circuit board, and wherein the contacts of the connector may also be adapted for electrically connecting the first and second substrate (see Fujishima, fig. 1-fig. 6).

As per claim 10, the modified RF apparatus of Ammar and Fujishima further disclosed the connectors are provided along at least one side of the respective first and/or second substrate in an essentially linear arrangement (see Fujishima, fig. 1-fig. 6).

As per claim 11, the modified RF apparatus of Ammar and Fujishima further disclosed means maintaining a predetermined distance between the first and the second substrate include the connectors (see Fujishima, fig. 1-fig. 6).

As per claim 12, the modified RF apparatus of Ammar and Fujishima further disclosed the housing is shielding electromagnetic radiation (see Fujishima, 0010).

As per claim 13, the modified RF apparatus of Ammar and Fujishima further disclosed the first and the second substrates are separated by an intermediate shielding (see Fujishima, 0010).

***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Pablo Tran whose telephone number is (571)272-7898. The examiner normal hours are 9:30 -5:00 (Monday-Friday). If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban, can be reached at (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.
4. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) System. Status information for Published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-directauspto.gov>. Should You have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (in USA or CANADA) or 571-272-1000.

June 22, 2009

/Pablo N Tran/

Primary Examiner, Art Unit 2618